



Fig. 5 Nucleotide sequence encoding SAK 1 protein

GAACCTAAGGAAGATATACATATGTCAAGTTCATTGACAAAGGAAAATA
TAAAAAAGGGCGATGACGCGAGTTATTTGAACCAACAGGCCGTATTGAT
GGTAAATGTGACTGGAGTTGATGGTAAAGGAAATGAATTGCTATCCCCTCA
5 TTATGTCGAGTTCCATTAAACCTGGACTACACTTACAAAAGAAAAAAT
TGAATACTATGTCGAATGGCATTAGATGCGACAGCATATAAAGAGTTA
GAGTAGTTGAATTAGATCCAAGCGCAAAGATCGAAGTCACTTATTATGATA
AGAATAAGAAAAAAGAAGAACGAAGTCTTCCCTATAACAGAAAAAGGT
TTTGTGTCCCAGATTATCAGAGCATATTAAAAACCTGGATTCAACTTA
10 ATTACAAAGGTTGTTATAGAAAAGAAATAAAACAAAATAGTTGTTATTAT
AGAAAGTAATGTCTTGATTGAATATGTGTAGTGAAATTATCTTCATCAAA
TTCTCATTCATGCACGAATGGTTCTGCCACCTAATCAGATATTACGTGA
CTTATGGGGAGAAATCAGTTGGATAAAAGTGGAGGATCCAGTAGCCG ((606 nucleotides)
15 Oligo's :
SAK-3 primer :
5' - GAACCTAAGGAAGATATACATATGTCAAGTTCATTGACAAAGGA-3'
(45 mer)
SAK-2 primer :
20 5' - CGGCTACTGGATCCTCCACTTTATCCAAACTGATT -3' (38 mer)

Fig. 6 Nucleotide sequence encoding SAK-2 protein

GAACCTAACGCAT ATGAAAGGAAAATATAAAAAGGGCGATGACGCGAGTTA
TTTGAAACCAACAGGCCGTATTGATGGTAAATGTGACTGGAGTTGATGG
TAAAGGAAATGAATTGCTATCCCCTCATTATGTCGAGTTCCCTATTAAACC
5 TGGGACTACACTTACAAAAGAAAAAAATTGAATACTATGTCGAATGGGCAT
TAGATGCGACAGCATATAAAGAGTTAGAGTAGTTGAATTAGATCCAAGC
GCAAAGATCGAAGTCACTTATTATGATAAGAATAAGAAAAAGAAGAAC
GAAGTCTTCCCTATAACAGAAAAAGGTTTGTGTCAGATTATCAGA
GCATATTAAAAACCTGGATTCAACTTAATTACAAAGGTTGTATAGAAAA
10 GAAA TAAAACAAAATAGTTGTTATTATAGAAAGTAATGTCTGATTGAAT
ATGTGTAGTGAAATTATCTTCATCAAATTCTCATTGTCACGAATGGTTC
TGCCCCACCTAACGATATTACGTGACTTATGGGGAGAAATCAGTTGGA
TAAAAGTGGAGGATCCAGTAGCCG (582 nucleotides)

Oligo's :

15 SAK-4 primer :

5' - GAACCTAACGCATATGGCTGGAGCTTATAAAAAGGGC -3' (36 mer)

SAK-2 primer :

2. 5' - CGGCTACTGGATCCTCCACTTTATCCAAACTGATT -3' (37 mer)

Fig. 10 Sequences encoding of SAK, SAK-1 and SAK-2 proteins

SAK TCAAGTCATTGACAAAGGAAA
SAK-1 GAACTTAAGGAAGATATACTATGTCAAGTCATTGACAAAGGAAA
SAK-2 GAACTTAAGCATATG g c tGGA gc

SAK ATATAAAAAGGGCGATGACCGAGTTATTTGAACCAACAGGCCGT
SAK-1 ATATAAAAAGGGCGATGACCGAGTTATTTGAACCAACAGGCCGT
SAK-2 ↑ ATATAAAAAGGGCGATGACCGAGTTATTTGAACCAACAGGCCGT

SAK ATTTGATGGTAAATGTGACTGGAGTTGATGGTAAAGGAAATGAATTG
SAK-1 ATTTGATGGTAAATGTGACTGGAGTTGATGGTAAAGGAAATGAATTG
SAK-2 ATTTGATGGTAAATGTGACTGGAGTTGATGGTAAAGGAAATGAATTG

SAK CTATCCCCTCATTA TGTCGAGTTCTATTAAACCTGGGACTACACT
SAK-1 CTATCCCCTCATTA TGTCGAGTTCTATTAAACCTGGGACTACACT
SAK-2 CTATCCCCTCATTA TGTCGAGTTCTATTAAACCTGGGACTACACT

SAK TACAAAAGAAAAAAATTGAATACTATGTCGAATGGGCATTAGATGCGA
SAK-1 TACAAAAGAAAAAAATTGAATACTATGTCGAATGGGCATTAGATGCGA
SAK-2 TACAAAAGAAAAAAATTGAATACTATGTCGAATGGGCATTAGATGCGA

SAK CAGCATATAAAGAGTTAGAGTAGTTGAATTAGATCCAAGCGCAAAG
SAK-1 CAGCATATAAAGAGTTAGAGTAGTTGAATTAGATCCAAGCGCAAAG
SAK-2 CAGCATATAAAGAGTTAGAGTAGTTGAATTAGATCCAAGCGCAAAG

SAK ATCGAAGTCACTTATTATGATAAGAATAAGAAAAAAGAAGAAACGAA
SAK-1 ATCGAAGTCACTTATTATGATAAGAATAAGAAAAAAGAAGAAACGAA
SAK-2 ATCGAAGTCACTTATTATGATAAGAATAAGAAAAAAGAAGAAACGAA

SAK GTCTTCCCTATAACAGAAAAAGGTTTGTCCCAGATTATCAGA
SAK-1 GTCTTCCCTATAACAGAAAAAGGTTTGTCCCAGATTATCAGA
SAK-2 GTCTTCCCTATAACAGAAAAAGGTTTGTCCCAGATTATCAGA

SAK GCATATTAAAAACCTGGATTCAACTTAATTACAAAGGTTTATAG
SAK-1 GCATATTAAAAACCTGGATTCAACTTAATTACAAAGGTTTATAG
SAK-2 GCATATTAAAAACCTGGATTCAACTTAATTACAAAGGTTTATAG

SAK AAAAGAAATAA
SAK-1 AAAAGAAATAAAACAAAATAGTTGTTATTATAGAAAGTAATGTC
SAK-2 AAAAGAAATAAAACAAAATAGTTGTTATTATAGAAAGTAATGTC

SAK-1 TTGATTGAATATGTGTAGTGAAATTATCTTCATCAAATTCTCATT
SAK-2 TTGATTGAATATGTGTAGTGAAATTATCTTCATCAAATTCTCATT

SAK-1 CATGCACGAATGGTTCTGCCACCTAACAGATATTACGTGACT
SAK-2 CATGCACGAATGGTTCTGCCACCTAACAGATATTACGTGACT

SAK-1 TATGGGGAGAAATCAGTTGGATAAAAGTGGAGGATCCAGTAGCC
SAK-2 TATGGGGAGAAATCAGTTGGATAAAAGTGGAGGATCCAGTAGCC

SAK-1 **G**
SAK-2 **G**

Fig. 11 Modification of SAK in SAK-2

| | | | | | | | | | | | |
|-------|------|-------|------|---------|---------------------|--------------|--------|-----|---------|-----|-------|
| | 1 | 10 | 20 | 30 | 40 | | | | | | |
| SAK | SSSF | DKG | KTG | DDASY | FEPTGPYLMVNVTGVDGKG | NELLSPHYVEFP | | | | | |
| SAK-2 | | AGAT | KKG | DDASY | FEPTGPYLMVNVTGVDGKG | NELLSPHYVEFP | | | | | |
| | 50 | 60 | 70 | 80 | 90 | | | | | | |
| SAK | I | KPG | TTLT | KEKIEYY | VEWAL | DATA | YKEFRV | VEL | ASAKIEV | TYY | DKNKK |
| SAK-2 | I | KPG | TTLT | KEKIEYY | VEWAL | DATA | YKEFRV | VEL | ASAKIEV | TYY | DKNKK |
| | 100 | 110 | 120 | 130 | 136 | | | | | | |
| SAK | EET | TKSFP | I | TEKGF | VVPDL | SEH | IKNPG | FN | LIT | KVV | IEKK |
| SAK-2 | EET | TKSFP | I | TEKGF | VVPDL | SEH | IKNPG | FN | LIT | KVV | IEKK |